

Propagation

There are many ways to propagate a plant the most common are by cuttings, seed and division, we can also propagate by budding, grafting and layering these techniques are not as easy and may not always be successful.

Cuttings

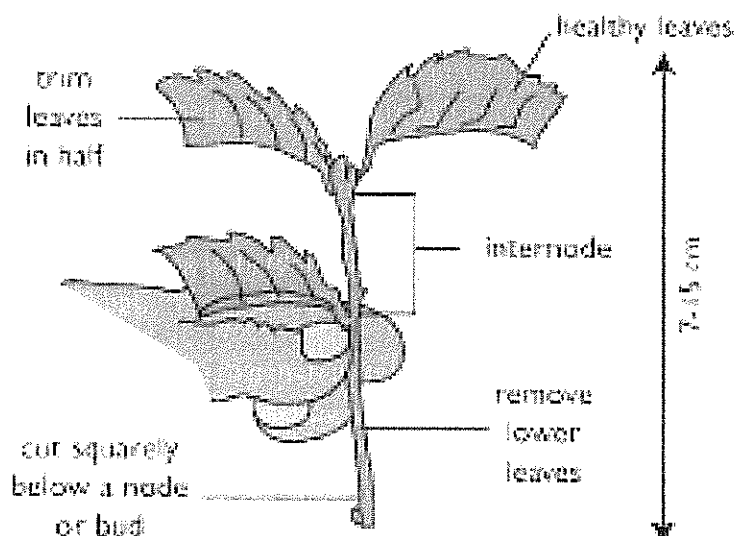
A cutting is the term we use for lengths of plant material being used specifically to propagate new plants. In contrast to growing plants from seed, where we may get plants that are slightly different from what we expected, cuttings will always be clones of the parent plant from which the cutting was taken. So a camellia cutting from a plant with a pink and white flower will produce another identical camellia with a pink and white flower. If you were to take the seed from that same parent camellia you would not be guaranteed to get a camellia with a pink and white flower. There are 3 forms of cuttings

Softwood Cuttings are generally taken in spring and early summer when the plant is putting on its new growth and there are a lot of growth hormones in the plant system. Soft wood cuttings usually strike relatively quickly. These like a little heat.

Semi-hardwood Cuttings are taken mid- summer after flowering when the plant is putting on new growth and starting to harden. They strike quickly and give good results without the need for additional heat.

Hardwood Cuttings are generally taken at the end of summer and take longer to strike than those taken earlier in the season. However as this period coincides with the garden's autumn pruning, particularly of perennials, it is easy to source cutting materials. And with so much cutting material available, even if some fail, most will be ready to plant the following spring.

The most successful plant material for cuttings comes from the 'square' stemmed plants eg from the *Laminaceae* family. This includes salvias, mint, rosemary and many other herbs.



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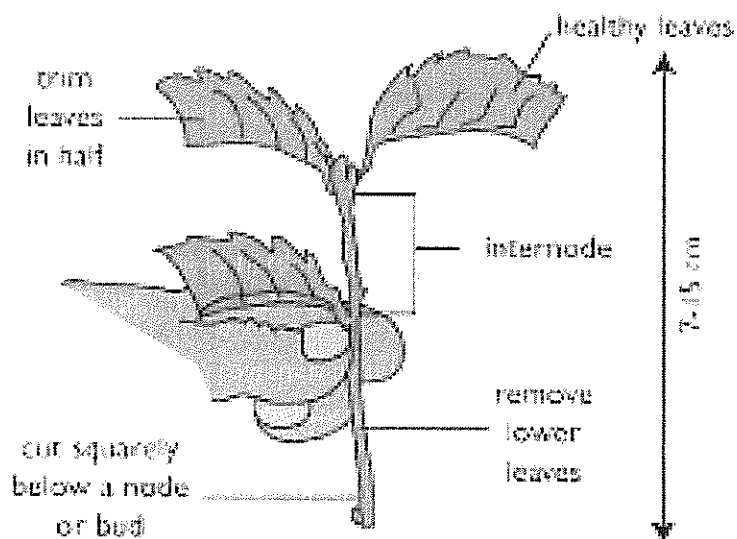
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Cuttings do best in a free draining mixture so that they don't rot. It is best to put lots of cuttings in the same pot rather than single cuttings in many pots. The warmth and humidity of having them all clustered together will help them to strike. To increase the warmth and humidity, and maintain heat overnight, if possible cover the pot with a clear plastic 'hood' or the end of a polystyrene bottle. If doing this, keep the pot out of direct sunlight so that the air inside in the pot doesn't heat up too much and 'cook' the cuttings. Mist the cuttings regularly to help regulate the temperature and keep a moist environment. You can generally tell when the cutting has taken if it starts to put on new leaves and to grow. However be patient as the roots may take longer to develop.

Division

Plant division involves digging up plants and dividing them into two or more sections. This is a common practice performed by gardeners in order to keep plants healthy and create additional stock. Plant division involves splitting or dividing of the crown and root ball, its use should be limited to plants that spread from a central crown and have a clumping growth habit. When and how often a plant is divided depends on the type of plant and the climate with which it is grown. Generally, most plants are divided every three to five years, or when they have become overcrowded. Most plants are divided in early spring or autumn; however, some plants can be divided any time. Basically, spring and summer-flowering plants are divided in autumn while the others in spring, but this doesn't always have to be the case. There are also plants that do not respond well to having their roots disturbed. These plants are best divided while dormant to reduce the effects of shock.

Dividing plants is easy. Simply dig up the entire clump and then carefully divide the crown and root ball into two or more sections, depending on the size of the clump. Sometimes you can divide garden plants with your hands, as with many bulb species, while the use of a sharp knife or garden spade is often necessary to get the job done when dividing plants.

Once you have divided plants, shake off the excess soil and remove any dead growth. You might want to cut the plants back prior to replanting too. This helps reduce any shock received from the division process and transplanting. Replant your plant divisions in a similar location or another pot.

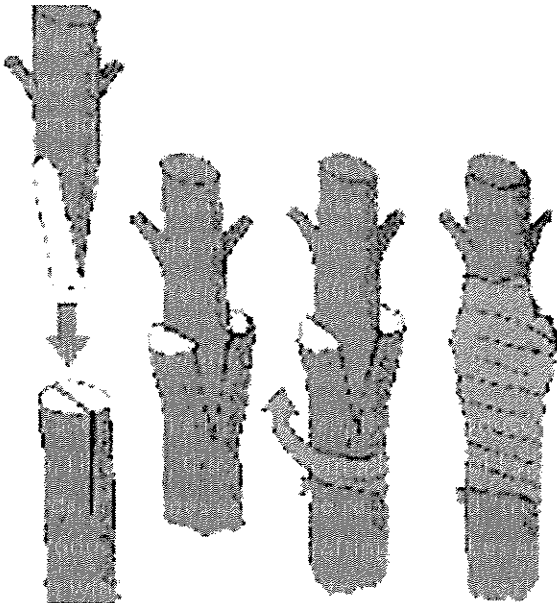
Seed

We can buy or collect seed, collecting our own seed can be fun and rewarding it may also have some interesting results. Seed has come from a fruit, the fruit has developed through pollination, the mix of pollen from one plant to another is what makes the plant that germinates from the seed different to the mother plant it was collected from, just as our children are a mix of both parents. Growing vegetables from seed is fast and easy, other plants may take years and require special treatment before they will germinate, some need to be kept in the freezer, while others need extreme heat or scarification. It is easy to collect seed but you need to identify when it is ready to collect, picking a seed pod too early may mean the seeds are not ripe yet and will not germinate. Leaving the seed pod for too long may mean the seed will have already fallen out before you have had a chance to collect it. Once you have collected your seed you may need to store it for planting later. Seeds from a tomato will need to be removed from the fleshy fruit, dried and stored in a dry, cool place, in a paper bag. Warmth and moisture are the greatest enemies of stored seeds. When the weather has

warmed up again and the days are longer you may take out your tomato seed and plant it in a seed raising mix until it has become a seedling, you could also plant it straight in the veggie garden. Many people say Melbourne Cup Day is the day to plant Tomatoes. By collecting seed from a healthy thriving plant we ensure our next crop is not susceptible to disease, we will also have a plant that has adapted to our environment. If we have purchased seed that may have come from Queensland it may struggle and not do well here in Victoria, even if we collected seed from Brighton and planted them in Upper Ferntree Gully they may not do as well as if we had collected them from a plant growing in close proximity to where we want our garden to grow. As our seed needs to be collected at the right time they also need to be planted at the right time. If we planted our tomato seed in winter, it would not germinate and may just die off in the soil or it may lay dormant until the weather has warmed up enough and the conditions are right for it to grow.

Budding and Grafting

The seed from a Haralson apple will produce an apple tree, but it will not produce a Haralson apple tree. Likewise, the seed from a Honeygold apple will not produce a Honeygold apple tree. In other words, fruit trees cannot be reproduced "true" to the original cultivar from seed. They can only be reproduced by grafting. Grafting describes any of a number of techniques in which a section of a stem with leaf buds is inserted into the stock of a tree. One of these techniques is the apical wedge graft, this is the most easy method for a home gardener. The best time to graft is in spring. For grafting to work the cambium layers must match and they will eventually fuse together.



The technique of budding is a little more difficult; it is usually done on roses or fruit trees and is done in spring. The cambium must be touching on both the bud and plant the bud is being grafted to.

